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FOOD AND HEALTH EDUCATION

An Open Forum for Home Economics Workers

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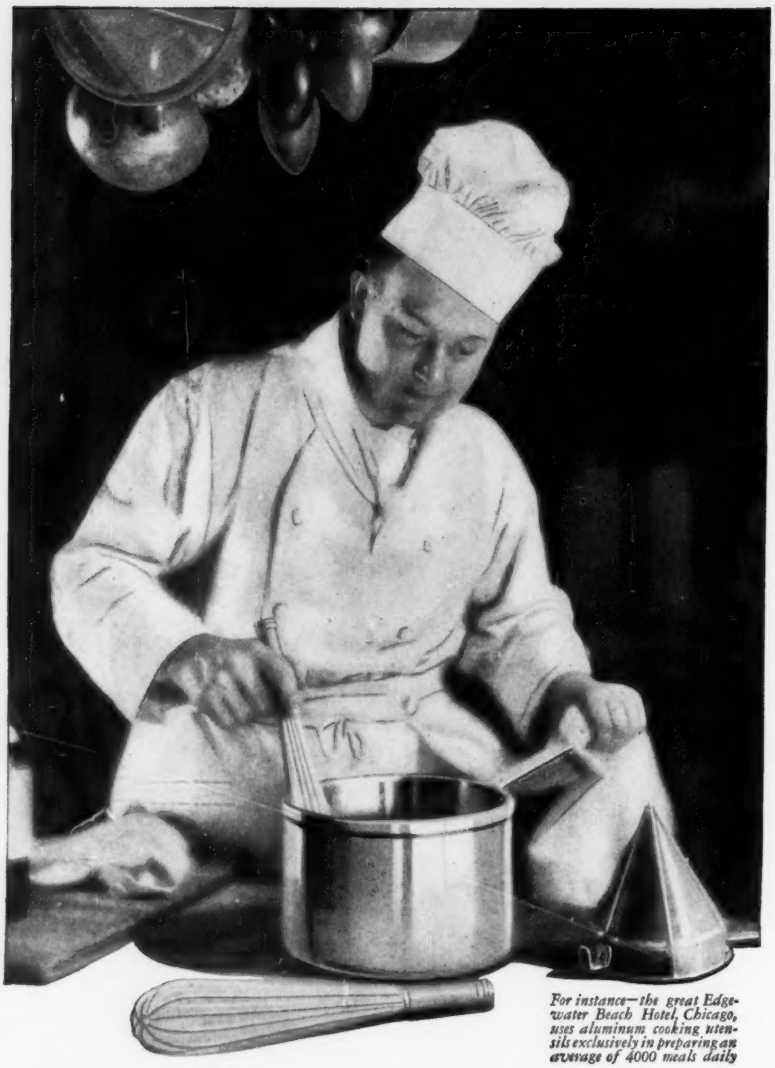

For instance—the great Edgewater Beach Hotel, Chicago, uses aluminum cooking utensils exclusively in preparing an average of 4000 meals daily

The BEST COOKS *use* Aluminum

The chefs of many world-famous hotels preside over all-aluminum kitchens. They cook *everything* in aluminum—for they have found that aluminum cooks everything well.

Some of these experts praise the greater durability and economy of aluminum utensils. Others speak of the ease with which this ware is kept clean and sanitary. Still others call attention to its safety for all kinds of cooking.

Hospitals, too, and steamship lines, and railroads, and packers of food products are using aluminum more and more. And housewives, unwilling that the large user should monopolize such efficiency and economy, are deciding in increasing numbers that the all-aluminum kitchen is better than one equipped with a bit of everything.

The best cooks use aluminum.

ALUMINUM WARES ASSOCIATION

Publicity Division, 844 Rush St., Chicago

Write for pamphlet. *"Aluminum and Aluminum Ware" is the title of a recently published review of the latest scientific researches into the nature and uses of aluminum and the character of aluminum cooking utensils. A copy will be sent free.*

FOOD AND HEALTH EDUCATION

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The Drive Towards the Whole Child

The first of our May Day material was published last month and, pursuant to our policy of using this page for a variety of messages, we are letting Miss Glover speak to our readers.

As today's news sheet reflects yesterday's happenings, each new generation freshly emerged from the home and the school tells the story, in their habits, ambitions, their emotional, social and cultural standards, of the mould through which they have just passed.

Across the wall of the Belshazzar's palace of material ease and luxury in which we have been living, youth of today has inscribed its handwriting, flung its challenge.

"What is the *matter* with us?" parried a college freshman of eighteen to an unmarried aunt, who had been his guardian and chum, herself a leader of youth and an educator. "You ask us that incessantly. The matter is you—you older people. You've turned us loose in the midst of this turbulence with nothing to go on. With all our experimenting we are just trying to get at something that's real, to *find* something to go on."

That is youth's case—the handwriting on the wall: "You have turned us loose with nothing to go on."

The generation we send out into the world today reflects the uncorrelated enthusiasms of the early drive towards child conservation. Parts of the structure they represent are splendid, but as a whole it is lacking in architectural symmetry, underlying unity of plan. They are in general physically more vigorous, mentally freer and more alert than any who have gone before; their weakness lies in poverty of the spirit that gives a central motive power.

The Child's Bill of Rights

THE ideal to which we should strive is that there should be no child in America, that has not been born under proper conditions, that does not live in hygienic surroundings, that ever suffers from undernutrition, that does not have prompt and efficient medical attention and inspection, that does not receive primary instruction in the elements of hygiene and good health.

Herbert Hoover

With a rapidly growing momentum, intelligent, parenthood, the teaching world, the world of science are taking up the challenge of youth. The child for the first time is being studied from the inside out, instead of from the outside—adult viewpoint—in. The pattern of childhood, not in segments but as a whole, is slowly and painstakingly being constructed so that in time we shall have the basis of a real understanding of and approach to the child.

These hopeful things are springing forth in response to this new motive which is beginning to impel large groups of people!

Parents are gathering together under expert guidance to examine into their common problems, to study the motives of conduct of children, to determine the environment most encouraging to development.

Centers of research are being established at many universities where laboratory methods are being applied to the study of childhood, in its specific and in its total aspects.

Studies of children are being made by physicians, by psychologists, both individually and in clinical groups, to get an accurate measure of physical and mental development in terms of the normal.

Observation and corrective

(Continued on Page 37)

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Nutrition and Health Outline

By H. M. Hemsing

N. B. I. It is believed that health can be taught as well, if not better, indirectly, that is, through natural situations that arise and through correlation with other subjects. Frequently the teacher will find she can combine the nutrition lesson with the language, reading or geography very effectively.

II. We are interested in having the children acquire health knowledge, but we are much more interested in having them acquire health habits. If this is held clearly in mind and the teacher will bend her energies toward using all the devices and materials suggested as a means toward this end, the effort will be worth while. Frequently these devices are treated as though they were ends in themselves.

III. Too much cannot be said with respect to keeping the lessons alive and interesting. An adverse attitude towards health will be all too easily created if this study becomes monotonous "preachy," or stale. For this reason, it is believed that a textbook or a fixed course of study is inadvisable except as a source of ideas. Flexibility of subject matter and of method is essential. This outline is intended to be tentative and suggestive.

IV. Effort is being made to grade the work so as to preserve a proper sequence of difficulty and also so as to vary the work and keep it new and interesting. It is therefore desirable that teachers hold in reserve the ideas suggested for the grades in advance of the particular one they are teaching. There is no objection, however, to referring back to or reviewing the work of previous years if desired or judged advantageous.

V. Please keep all outlines.

VI. Return library books promptly.

LESSON I.

I. Aim: To give the child such a picture of health that he will want to do the things that make him healthy.

II. Problem: What is health?

Among the facts around which this lesson is centered are the following:

A healthy boy or girl.

(1) Looks nice, has bright eyes, good color. (Do not put too much emphasis upon red cheeks). Investigation by physician has shown that the ruddy complexion characteristic of some nationalities is not peculiar to the Polish and that this paleness does not necessarily indicate an anemic condition.

(2) Feels like working and like playing; has "pep"; does not tire readily.

(3) Has firm muscles.

(4) Has strong, good teeth.

(5) Is happy, has a good mental attitude.

(6) Has good posture, is free from defects.

(7) Weighs enough for age and height.

(The children either have been or shortly will be weighed and measured. Have each child know whether he weighs what he should, but be careful to have it understood that his weight is only on indication of his state of health. If there are special defects indicated on the health cards, the correction of these is a matter of interest and investigation to be followed up in home calls).

III. Activities

Grade I

Show pictures or cut out paper dolls to represent a thin, cross unhealthy child and a normal, happy, healthy child. They might be given some name or belong to the "I Will" and to the "I Won't" families.

Grade II

Tell the story of "Little Pig Runt." (See Lesson XVI on last year's outline. A copy will be placed in the library).

Record each child's weight on a card. Use this from time to time to stimulate interest in following health habits. If possible, weigh the children from time to time.

Grade III

1. Show a picture of children playing or talk about "having a good time" so as to bring out the characteristics of the healthy child.

2. Use the rhyme in "Cho Cho's Grandma" as a means of showing the relation of height and weight to health.

3. Interest the children in "climbing health hill." (See "Health Habits").

Grade IV

1. Tell the story of "The Jack Bean Vine". (Lesson XV on old outline).

2. Picture or story of a game or race. Who will win? Why?

The Grain of Corn the Farmer Chose

Grade V

How many of you have lived in the country? Did you ever see a farmer pick his seed corn? He does not select it right from the stalks. In the fall when the corn has grown hard on the ear and the stalks are yellow and dry it is hauled to the corn crib. After the corn has been shucked, the farmer selects the ears that are to be his seed corn for planting the next spring. These are the things he looks for when he selects the ears:

length of the ear
roundness of the ear
number of rows of grains
depth the grain grows in the cob
quality of the germ of the grain
and the healthiness of the young sprout.

All these things the farmer look for so that his next year's crop will yield the largest possible number of bushels of corn.

Jimmie's grandfather was a farmer. One day Jimmie had gone out to the farm. He stood watching his grandfather select his seed corn. Suddenly he seized an ear and threw it aside.

"Hm, no good!" he muttered, "not fit to use."

"Corn not fit to use!" Jimmie began to think. He had always thought that corn was corn and that it was all fit to use. How careful grandfather was.

Then he began to wonder, "Am I fit to use?" Suddenly he remembered the card the doctor had given him at school the year before.

Fit for Service

"The doctor said that I would not be 'fit for service' until I had a clean up and got rid of my tonsils. He said they were keeping me from growing. On the same card he told me I needed to go to the dentist. He also told me to take that card home to father and mother. I didn't think much of that stuff, but I took home the card and talked Mother and Dad out of sending me to the doctor.

"If you have to be so careful about seed corn, I guess boys are just as important. I had better see about making myself fit for use—that's what 'fit for service' means. My nutrition teacher said I wasn't growing."

Grandfather saw out of the corner of his eye how thoughtful Jimmie had become so he motioned to him to sit down beside him.

"See that," he said as he ran his thumb nail along an ear of corn, "a perfect ear. No matter how good the soil may be to give the young corn plants food they will never be quite what they should if they are not healthy grains for seed."

"My nutrition teacher says the same thing about us," said Jimmie. "She said good food and plenty of it is not all we need. People who go regularly to the dentist several times a year, wear glasses when they need them, and have the things done the doctor says to, are going to be the ones who can best use the food they eat."

"And they will be tall and straight and well rounded," said grandfather as he turned the perfect ear in his hands, "and have even rows of teeth."

"I guess," said Jimmie, "that's being 'fit for service'."

—Red Cross Nutrition Letter.

Grade V

1. "The Grain of Corn the Farmer Chose". (See Red Cross Nutrition Letter) What things must you change about yourself in order to make you "fit to use"? Is the list the same for everyone?

2. Start a booklet as soon as possible. Let the children devise slogans bearing on the lessons which are suitable for posters. These slogans might be placed in the notebook and illustrated by those who care to. (Keep the best booklets).

Grade VI

1. "The Picture of How I Grew". (Red Cross Nutrition Letter)

2. Use salmon health record cards and let each child use the information thereon to make a picture of how he grew during the last year. A line showing how he should have grown should be drawn also. Figures for normal weights can be obtained from height weight charts in teacher's possession or in the library, or from the following table:

Average Height and Gain in Weight for Children 12 Years Old.

Average Height (inches)			Average Annual Gain (lbs.)	
	Boys	**Girls**		
Short	54	54 Short	8	10
Medium	58	58 Medium	9	13
Tall	61	62 Tall	12	9

3. A booklet, "It Pays to be Healthy" might be made.

4. Questions for discussion.

(a) What is health?

(1) How does a perfectly healthy person look? How does he act?

(2) Does a healthy person have colds often? Headache? Is he absent from school often because he "doesn't feel well"?

(b) Why should we want to be healthy?

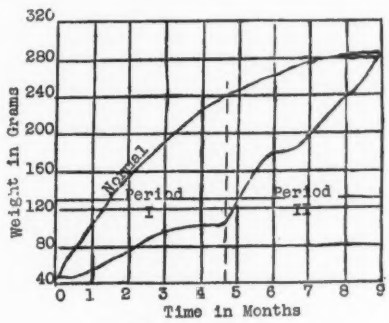
(1) Who has the best chance to win games? To do good school work? Who looks the best? Has the best time?

The Picture of How I Grew

This is a picture showing how a pig grew. During periods "I" it did not get just the kind of food it should have had. During period "II" it was given the food that was best. Now you must remember that during this time the pig had all the sun-shine, fresh air, exercise, and rest that it needed.

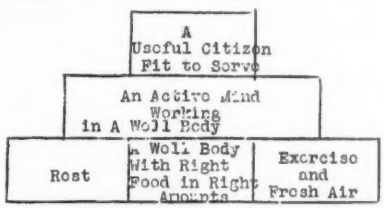
The line above, that shoots straight up, shows how its growth curve would have looked if it had been fed right food from the start.

Now I have been wondering whether you are getting all the things your body needs—especially the right kind of food and the right amount of it. It is plain the growth of the pig depended on his food. I wonder if



Growth Chart

ours doesn't, too? And then, I wonder if our minds don't depend on our bodies? Can you work better when you feel better? We depend upon our minds and our country depends upon us! If we should build up the blocks perhaps here is the way they would look:


A Useful Citizen Fit to Serve
An Active Mind Working in A Well Body
Rest
A Well Body With Right Food in Right Amounts
Exercise and Fresh Air

The Way Our Blocks Should Look

You are keeping a chart of your weight and height. I wonder if you won't also want to make a chart of your standing in your class work and find out if your weight curve and your grade curve climb together. Do you suppose that it does take a well nourished body to serve as the house for a healthy mind?

—Red Cross Nutrition Letter

LESSON II

(Rose's "Teaching Nutrition in the Elementary Grades")

I. Aim: To give the child a general idea of the rules of healthful living.

II. Problem: The things that count most in making children grow big and strong and in keeping them healthy are:

(1) Food
(2) Water
(3) Rest and Sleep
(4) Playing in the Sunshine and Fresh Air
(5) Daily Bowel movement
(6) Keeping Happy

III. Activities

Grade I

Arrange a series of pictures to show what "I Will" does to make her look so healthy. If proper pictures cannot be procured, a series of skeleton figures acting out various health rules will serve just as well. "I won't" does none of these things and so looks thin and ugly, etc.

Grade II

1. Tell the story of Johny and the Fairy. Johny is a weak little boy, who has to drop out of games because he gets too tired and can't win. He sits down and wishes aloud that he could play like the other boys. A fairy appears and tells him some of the things he must do. Johny is so glad that he runs away before the fairy has told him everything. The fairy calls him back and tells him the rest of the things.

The next day Johny forgets and refuses to eat his breakfast. When he gets to school he has to stop playing because he gets tired. Wishes again. The fairy appears and gives him a clock with a bell which rings every time he forgets a rule. By and by Johny remembers so well that he doesn't need the clock. The fairy comes to get it but doesn't know Johny because he has changed so much.

2. Play the story.

Grade III

1. Build a "Health House" of bricks made of the different health rules.

2. Teach the song, The Six Best Doctors.

Tune: Yankee Doodle.

The six best doctors anywhere
And no one can deny it,
Are sunshine, water, rest and air,
Exercise and diet.

These six will gladly you attend
If only you are willing
Your minds they'll cheer, your ills they'll mend,
And charge you not one shilling.

Anonymous

Grade IV

The story of the Live-rights and the Do-As-I-Please families. Describe the latter as unhealthy and unhappy. They have a friend, Dr. Pill-box, who gives them medicine which helps them just for a while. The Live-rights have a friend in Dr. Keep-well, who tells them the rules of healthful living as indicated before. Try to get the children to tell what Dr. Keep-well tells the Live-right.

Grade V

1. Relate to previous lesson on "Keeping Fit." Discuss how each one of the factors mentioned helps to keep us fit, as:

(a) Food mends our bodies and builds them.

(b) A bowel movement every day makes us feel better.

(c) Water helps to keep our bodies clean inside and outside.

(d) Rest and sleep give our bodies a chance to grow.

(e) Keeping happy helps us to get well and to keep well.

(f) Playing in the sunshine and fresh air makes us strong and keeps us well.

2. Add the main facts of the new lesson to this booklet.

Grade VI

1. Average length of life:

1800	1900	1921	1930
35 years	45 years	58 years	?

What things will increase the length of life? Show how these health rules, if followed, may help people to live longer and better. Tell about Ponce de Leon's search for the "Fountain of Youth" and show how the modern search for health is a more real and more worth while search for the "Fountain of Youth."

Lesson III

I. Aim: To show the importance of milk as a food and to interest the child in drinking it.

II. Subject Matter

1. Boys and girls need one quart of milk every day to help them grow big and tall.

2. They can get their quart by drinking a glassful of milk at each meal and one after school (or they can have one glassful cooked in soup or pudding for lunch or for dinner).

3. Cocoa may take the place of milk on cold mornings if it is not strong,—just hot milk flavored with cocoa.

III. Activities

Tell the story of Jimmie and His Pets (See Lesson V, last year's outline).

Lesson IV

Activities

1. Dramatize the story of "Jimmie and His Pets."

2. Show a Coffee pot and a Teapot with scowly faces and a Milk bottle with a smiling face (patterns found in "Health Habits"). Have each talk, inviting a girl to drink and promising that he will make her look like him. The little girl answers, "No, no, go away, Mr. Coffee pot, I want Mr. Milk bottle." Let someone fill an imaginary glass from the milk bottle for each child and then all play they are drinking the milk.

Lesson V

Tell the story "The Secret" with appropriate illustrations.

THE SECRET

Once upon a time there was a little boy. His name was Teddy. Teddy had a bicycle to ride. He had a fine bat and a new ball. He had a train of cars that would run, a pony and a dog, a white rabbit, a red wagon, and many other things.

But Teddy was not happy. He was not happy because the boys at school would not play with him.

Dick said, "Teddy is too small to play with us. We do not want him."

Billy said, "Teddy is not strong enough to play with us."

Teddy could not run fast. He was the smallest boy in school. He was smaller than Peter. And Peter was only six.

Teddy wanted to play ball with Dick and Billy and Jim. He wanted to be in snow fights. He wanted to run a race and win. He wanted to be big and strong.

One day Teddy sat down and cried. Soon someone said, "Stop crying, Teddy. Tell me, why you cry? Let me help you." Teddy looked up. A Fairy stood near him.

"O Fairy!" said Teddy, "I want to be as big as Jim." "Very well," said the Fairy, and she whispered something in Teddy's ear.

That night when Teddy ate his supper he asked for brown bread and milk. He scowled at cake and pickles.

Teddy opened his window wide. And when the clock struck seven he jumped into bed. He slept and slept.

The next morning a cup of coffee stood near Teddy's plate. He pushed it away and he said, "No more of that for me. I am going to drink milk."

Teddy drank milk. He ate food that put strong iron into his arms and legs. He slept with his windows wide open. He went to bed at seven o'clock. How he grew! Soon he could run fast. He was strong and he was nearly as big as Jim. Now he is bigger than Jim.

Dick says, "We want Teddy to play on our team. He can bat a ball. He can catch a ball. And how he can run! We shall win every game."

—Courtesy of Miss Mudge.

GRADE II

Lesson III

Tell the story of "The Milk-Bottle Man." (Make a jointed figure of a "Milk Bottle Man" to illustrate the story.)

Once there was a little girl named Mary Won't. She wouldn't drink her milk and she wouldn't eat anything unless she liked it. She would not stop drinking coffee. One night she drank a whole cup of strong coffee. When she went to bed she couldn't sleep for a long time. After a while she fell asleep and this is what she dreamt.

She dreamt she saw a milk bottle, but it looked like a man. It had arms and legs and he was crying, "Oh dear, what shall I do? The milkman left me at Mary Wont's door and she won't drink my milk."

When Mary heard this she said, "No, I don't like milk and I don't see why I should drink it."

The Milk Bottle Man cried harder than ever and said, "What will become of Mary Won't? She won't grow and she won't be big and strong and she is so cross nobody likes her."

Mary didn't like that one bit. She said, "If I drink milk, will it make me grow big and strong?"

"Yes," said the Milk Bottle Man, "it will help to make you grow, but tea and coffee won't help you to grow. They are keeping you from growing."

"Well", said Mary, "I will try drinking milk."

Every day she drank four glasses of milk but no coffee. She did this for a long time.

One night she dreamed about the Milk Bottle Man again. This time he was laughing and very happy. As he danced about, he cried, "Oh, Mary will drink her milk! She will drink her milk. And you should see Mary Will! She is growing so big and she looks so well you would hardly know her. She is happy all day and everybody likes her."

Then Mary awoke. But she kept right on drinking her milk for she knew what the Milk Bottle Man said was true.

Lesson IV

1. Teach "The Friendly Cow" by Stevenson. Talk about milk and where it comes from, using pictures

2. Read and talk about "The Milk Train."

THE MILK TRAIN

Chug, chug, choo, choo, down the track,
Hark! The engine big and black,
Is bringing milk all creamy white,
To make our bread taste good tonight.

The long, long train comes puffing in,
The men stand ready to begin
To load the cans and bottles too,
As they have well learned how to do.

And then the wagons drive away.
And carry milk to children gay
Let's wave a "thank you" to the train
So it will surely come again.

(Winifred Stuart Gibbs)

Lesson V

I. Subject Matter

1. Ice cream is a food. It should be eaten as part of a meal and not in between meals as an "extra".

2. Ice cream should be eaten slowly.

Illustrative Material

Building the House of Health

Whenever a child drinks good fresh milk
Whenever he eats ice cream.
He adds a brick to his House of Health
And then he adds a beam.
And every saucer of good cream soup
With vegetables blended well
Keep the House all spick and span and neat,
And swept and garnished well.
(Winifred Stuart Gibbs)

3. Call attention to the fact that many bricks and only a few beams are required.

GRADE III.

Lesson III

Subject Matter as indicated for Grade I.

Illustrative Material

1. The Fairies in the Milk Bottle. See "Health Habits". Let the children play they represent these fairies and let each tell what she does.

2. Have a Milk Bottle Race (See Health Habits).

Lesson IV

Tell the story, "She Would not Drink Her Milk" (In library).

Lesson V

Read the story "Why the Cow Jumped Over the Moon" (In library).

GRADE IV

Lesson III

I. Subject Matter

1. We need one quart of milk a day to help us gain in weight.

2. Milk is a good food because it has something in it which

(a) Builds strong muscles ("Patrick Protein").

(b) Builds strong bones and teeth ("Minnie Mineral Matter").

(c) Gives us "pep", makes us feel like playing and like working. ("Sally Sugar" and "Fannie Fat").

(d) Makes us grow and keeps us well ("Viola Vitamin").

II Activities

1. Draw milk bottles or make milk bottle booklets. Write the main facts of the milk lessons in these.

2. Color poster letter (Dairy Council literature, to be furnished).

Lesson IV

I Subject Matter

1. Coffee and tea may keep us from gaining. We should not let them take the place of milk.

2. Milk must have the best of care in the home. It should be kept clean, cool, and covered.

3. If we do not like milk we should have in soups, in puddings, or in cocoa.

II. Activities

Read the story of "The Wonderful Window" in "Cho Cho and the Health Fairy".

Lesson V.

I. Subject Matter

1. Some foods that we get from milk are butter and cheese.

2. Butter has two "fairies" in it, "Fannie Fat" and "Viola Vitamin". (What do they do for us?)

3. "Patrick Protein" lives in cheese as well as in milk. Cheese should be eaten with crackers or hard bread and chewed very well.

4. When we eat cheese we do not need meat.

II. Activities

1. Let milk sour or use a part of a junket tablet to thicken it. Strain through a cheese cloth to show how cottage cheese is made.

2. Tell or read the story, "Queen of the Milk Fairies." (In library).

GRADE V

Lesson III.

I. Subject Matter

1. Review subject matter in Lessons III and IV for Grade IV.

2. Discuss the importance of having milk pure. Why must it be kept "cool, clean, covered"?

Teach the term, "bacteria".

Bacteria, like people must have food in order to grow. Milk is good food for them too. Bacteria cannot live if the temperature is very high and cannot grow and multiply if it is very low and if they have no moisture. What ways of protecting milk from bacteria do these facts suggest?

Teach the meaning of the term, "pasturization".

Illustrative Material

"All about Milk."

A thermometer is useful in discussing the relationship of temperature to bacteria.

Lesson IV

1. The playlet, "Following the Milk Can" can be used as a means of summarizing the previous lessons in an interesting way. The parts can be assigned and either read or recited.

2. Discuss "Milk Products".

(a) Review the study of cheese.

Kinds.

How made.

Value in diet (a muscle builder and energy producer).

Ways of using.

(A bulletin on "Cheese" will be placed in the library.

Lesson V

I. Subject Matter

Milk Products—continued.

Butter

How made.

Value in Diet. Furnishes fuel or energy (contains fat). Produces growth (contains vitamins).

Use.

II. Activities

Make butter. A pint or half pint of heavy cream beaten with a Dover egg-beater. A Dover egg-beater can be used, or churns may be made.

GRADE VI

Lesson III.

I. Subject Matter

1. Review composition of milk.

Water (87 per cent)

Building material: for muscle (Protein); for bone (mineral matter — lime)

Fuel material (Fat, sugar)

Growth and health-keeping material (Vitamins)

2. Care of milk

Cow

Milker—clean hands, clean clothes.

Utensils

Milk

3. Discuss the importance of having milk inspection; relate this topic to good citizenship, show responsibility of people in (1) electing good sanitation and inspection officers; (2) caring for milk in the home so as not to spread disease.

References

"All about Milk"

"The Care of the Child's Food in the Home."

"Where to Place Food in the Household Refrigerator."

Lesson IV

I. Subject Matter—Milk continued.

1. Marketing

Containers (Why seamless)

Pasturization (review)

Why? How?

2. Use

Whole milk

Types of cooked milk dishes. Desserts(Name some), Soups, Creamed vegetables.

Skimmed

Sour

Evaporated (unsweatened)

Condensed (sweetened)

Dried.

When is it permissible to use evaporated, condensed or dried milk?

Illustrative material

1. Pamphlets in library.

2. Playlet, "Eating Milk". Parts can be read by the children if it is not desirable to take the time to learn them.

Lesson V

Subject Matter

Cheese (Review): How made; Kinds; Value as food; Use as food.

Butter (Review): How made; Value as food.

Ice Cream: Ingredients used in making; Handling—importance of cleanliness; Use as food.

When to eat it?

How to eat it?

Differences in food value according to materials use.

Activities.

1. A trip to a dairy, real or imaginary.

2. If butter or cheese have not been made in these classes, this would form an interesting project. (See directions for Grade V).

Editorial

(Continued from Page 33)

clinics are springing up all over the country where handicaps and defects are as speedily as possible treated and ways and means of developing the maximum child are being determined.

And the discovery and experimentation that is being brought out through these various means are being widely disseminated and absorbed into common practice in the home and in the school.

Many influences are at work to bring into unison the various scattered efforts touching the welfare of the child. Four years ago the traditional celebration of May Day as a festival for children was revived in a new sense as a day to call attention to the health of children. May Day has had very significant results in drawing together many organizations concerned with the well-being of children in a recognition of common interests and goals. It has served as a back-drop against which is screened the progress of community activities in the interest of children.

With each May Day health has expanded in its significance

(Continued on Page 48)

Student Club Work in Ewing, Virginia

By the Club Members

Lola McAlpin

THE Winifred Stuart Gibbs Club composed of the home economics students of the Lee County Industrial school, at Ewing, Virginia, was first organized in 1924, under Miss Lillian Horton, teacher. The club was named in honor of Winifred Stuart Gibbs, Editor of THE AMERICAN FOOD JOURNAL, who is our sponsor, and who is helping us in many ways with our work.

Of the original organization we are unable to find the details, but the records begin with reorganization in October 1925 with Miss Garnet Shufflebarger teacher.

Officers for 1925-6 were: President, Edna Breeding; Vice President, Alta Crumley; Secretary-Treasurer, Edith Breeding.

A number of improvements were made in our department, of which we will not give detailed account here.

This brings us to the present organization of the club which took place October 4, 1926. Miss Lola McAlpin is our teacher. The officers for the school year 1926-27 are as follows:

President, Marie Neil Thompson; Vice President, Janie Fugate; Secretary-Treasurer, Ruby Parkey.

Program Committee: Edith Breeding, Alice Horton, Icie Mae Collins.

We have twenty-eight club members: Edith Breeding, Rachel Davis, Onolee Brooks, Bonnie Grabeel, Gladys Grabeel, Zella Miner, Edna Myers, Mary Ellen Parkey, Marie Neil Thompson, Janie Fugate, Lillie Mae Robinson, Nettie Ball, Icie Collins, Jessie Combs, Eula Crockett, Anna Maye Harris, Bennie Hobbs, Golden Hobbs, Ruby Hobbs, Blanche Hollifield, Alice Horton, Blanche Marcum, Mary Gene Marcum, Verna Osborne, Ruby Parkey, Helen Willis, Lillian Robinson.

The club motto is, "Insist upon yourself; Never Imitate." The club colors are blue and white. We chose these colors because they stand for truth and purity. Our aims are as follows:

1. To keep the principal's office clean and in order.

2. To entertain the football boys, seniors, and the faculty some time during the school year.

3. To beautify the school grounds.

4. To keep the auditorium and stage in order.

Editor's Note—To Mrs. Ora Hart Avery, State Supervisor of Home Economics in Virginia, belongs the credit for an original idea. Realizing that outside contacts are always stimulating to both sides, Mrs. Avery invited representatives from various specialized fields in home economics to act as sponsors for the Virginia club. The fact that the editor of FOOD AND HEALTH EDUCATION was honored by an invitation to stand as sponsor for one of the clubs is very gratifying, and one of which we are all very proud. That FOOD AND HEALTH EDUCATION may repay in some small measure the debt it owes these girls and their teacher is our earnest wish. The debt, if it is to be paid in full, must be in terms of practical help as well as inspiration.

Second Year Home Economics Girls Just from the Kitchen

5. To give a dinner for the school board members.

6. To play games and teach new games to the children in the grades.

7. To give several plays during the year.

8. To put on a program every two weeks for chapel in high school.

Some of our aims we have already carried out, others we are doing all the while, and the rest we hope to do soon.

The day of the district meeting at Ewing, the home economics girls served dinner to all the faculty and visiting teachers.

We are at present divided into two groups, and are playing games with the children in the grades. They, as well as the club girls, seem to enjoy it very much. At the end of a certain time the two girls playing together having the best record will be given a prize.

We also plan to serve dinner to the school board members soon and entertain the football boys, seniors, and faculty.

The club girls helped with the County fair. We won first prize on

Winifred Stuart Gibbs Cottage (Before Remodeling)

the Community exhibit, which means $60.00 for our school library.

The state nurse visited our school while here. She gave a demonstration on the "Caring for the Sick," in the class of home nursing.

We, the Winifred Stuart Gibbs Club girls take much interest in our cottage, after helping to plan the furnishing of it. We have taken pictures of it before it was furnished and painted.

We have recently adopted a constitution and a set of by-laws for our club.

On the evening of February 4, our department gave a miscellaneous program, followed by a supper. The proceeds of the evening amounted to $51.70 of which $7.00 was expense, and of which $16.64 was used to pay for some of the basket ball uniforms.

Mrs. Dora Albert Ritchie has been recently chosen by our club as local adviser.

Since the first of November our class has been serving one hot dish for lunch each day to the children of the primary room, and to several other rooms most of the time. We are glad

Sewing Hour in the Bed Room

Dining Room (Serving Dinner)

Part of Home Economics Class

Living Room (Study Period)

Winifred Stuart Gibbs Club Officers

Mountain in Front of Cottage, Ewing, Virginia

Part of the Girls Wearing Sewing Aprons

Living Room (Mary Neil Thompson, President, Serving Tea)

to be able to report every primary student up to normal weight, and many above normal, as against a large number who were under weight when we began. The expense was borne by the class during November and December, and has been borne by the patrons since January.

We are planning to have each member of our club sow a bed or box of petunias and scarlet sage in her home, and are going to ask each mother in Ewing to sow a bed or box of petunias.

We are planning to give a father and son banquet in three courses soon. About forty guests will be present.

The Winifred Stuart Gibbs Club is doing all it can to learn something, have a good time, and show others a good time during the year 1926-27.

Something From "The Peptomist"

Winifred Stuart Gibbs Club Ewing

Again! We are glad to send a message to "The Peptomist." We are still active in our school work. Every day we are finding new problems to be solved. Recently we formed and adopted a written constitution. On last Wednesday our club unanimously chose Mrs. H. T. Ritchie as our local adviser. Our business meetings are held on the first and third Wednesday of each month, and a program is given on the first and third Tuesday of each month by the club members at chapel exercises.

Our county nurse made physical inspections in our school during October and she found many defects. Many of the defects have been corrected, more are being corrected now and we hope the good work will continue until our school shall have one hundred per cent of five-pointers in all the grades and throughout the high school. November the 15 our school received scales to be used in the health work. Money for the scales was made by a health program given the first of November. We now have thirteen girls in our class of thirty who are from ten to thirty pounds under weight. We are sorry to have such a large number under weight. Since January 3 we have worked out some menus and a schedule of living for underweights. Since Christmas we have been keeping a weight chart, weighing all the members of our class each week. Some of the girls who were under weight last October have reached normal weight, and we hope the others will soon. Since November we have also been helping with the health work in the grades. We serve the pupils every day (free of charge) some hot dish, such as soup, chocolate, baked apples, cookies, etc.

The children of the community bring foods from their homes to be prepared and served. They are very much interested in getting a cup of hot soup to eat with their cold lunches. Now the health chart shows all the primary pupils up to normal weight, or above in comparison to a large number who were considerately underweight when the hot lunch service began.

"This is the best soup I have ever drunk," said one little boy who had just drank a cup of hot chocolate. "I like this butter in my soup," remarked one little girl, who was drinking a cup of hot chocolate with a marshmallow in it.

Among the many activities of our club planned for the coming months are: organizing basket ball teams (for which suits have been ordered), a miscellaneous program to be given

(Continued on Page 48)

THE STORY OF FOOD AND FOOD PRODUCTS

The Story of Walnuts

By Arthur W. Christie

Assistant Professor of Fruit Products, University of California, and Chief Chemist, California Walnut Growers' Association

THE Walnut is the King of Nuts and one of the important horticultural crops of California. There are now about 110,000 acres of walnuts in California, of which about two-thirds are in bearing. The present normal production amounts to over 50,000,000 pounds annually, with a wholesale value of over $10,000,000. The only other state in the United States which grows walnuts commercially is Oregon, with a production of 1,500,000 pounds. California supplies nearly half of all the walnuts consumed in the United States, the remainder being imported from France, Italy, China and other foreign countries.

Comparatively Few Nuts Consumed in This Country

Although walnuts are widely known and used, the per capita consumption in this country is surprisingly small. The average American uses not over one pound of walnuts a year, which is equivalent to a half pound of kernels Walnuts are relatively high priced when compared with common food staples but the delicate flavor of this King of Nuts, together with the many varied and tasty ways in which they can be used have made walnuts a favorite with all who enjoy good things to eat.

Few consumers appreciate the many processes and great care with which the standard brands of walnuts are prepared for the market. Many probably think that the walnuts displayed in stores for sale are just as they came from the tree.

The marketing of California walnuts is dominated by the California Walnut Growers' Association. This very successful growers' cooperative marketing association, which handles about 85 per cent of the state crop, has been for years the leading agency in developing improved methods and equipment for preparing walnuts for market. These methods are all directed toward producing clean, bright nuts of uniform size and containing a high percentage of light colored, plump kernels.

In order that a better understanding may be had of their importance and value, a brief description will be given of the processes through which walnuts pass from the tree to the consumer. This should explain why the standard brands of walnuts necessarily bring a slightly higher price and are worth more than the dingy looking, unculled, ungraded walnuts direct from the orchard which are often sold in store and road-side stands at what appear to the uninformed to be bargain prices. The old saying that you only get what you pay for is well exemplified in walnuts. While some of these non-descript lots may, and some times do, contain a good percentage of plump, sound, kernels, they often contain a material number of moldy, wormy, dark or shriveled kernels.

Walnuts which have been through a modern packing house have the defective nuts very largely removed. For instance, the well known Diamond Brand of the California Walnut Growers' Association is guaranteed to contain not less than 90 per cent and normally averages 95 per cent of sound, plump kernels.

Getting the Nuts Ready for Market

When walnuts mature in September and October, the green husk which encases the nut splits open and permits the nuts to drop to the ground from where they are frequently gathered into sacks. The walnuts must next be dried to remove the excess moisture they still contain. There are two methods of doing this, either by exposure to the sun and wind in slat bottom trays for a number of days or by the use of modern dehydraters in which a strong blast of air heated to 110 degrees removes the excess moisture in a few hours. The dried nuts are then sacked and delivered to a nearby packing house of which there are about fifty in the state.

Walnuts are classified into three main groups, depending on the variety of tree from which produced. These are:

1. Soft Shells, produced by seedling trees.

2. Buds, produced by budded trees, largely of the Placentia Perfection variety.

3. Fancy Varieties, consisting principally of the Franquette, Mayette, Eureka, Concord and Payne varieties.

The budded and fancy varieties are more uniform and run to larger sizes with smooth regular shells and large plump kernels, and hence command higher prices. However, the soft-shells, though usually smaller and less uniform in appearance, contain very good kernels.

The first operation in the packing house is called "Blowing" and the apparatus is similar in principle to a vacuum cleaner. Nuts with blank or shriveled kernels are automatically separated from the heavier nuts with plump kernels by a suction fan.

The nuts next pass along belts where women pick out all nuts which are wormy, split, moldy, or of unattractive appearance.

The shells of the nuts are next cleansed and bleached in a dilute hypochlorite solution, giving them a bright, uniform straw color. The nuts are in the bleacher only two or three minutes and the liquid merely penetrates a short distance into the shells. Bleaching has no effect on the kernels but does greatly improve the external appearance of the shells. A second culling is then given to remove any nuts which have not responded to cleansing or bleaching.

Separating According to Size

The nuts are next separated mechanically into standard sizes by slowly revolving cylinders with sections containing holes of given diameters. For instance, in the case of Soft-shells, all nuts of one inch or less in diameter are called "Babies" and are separated from the larger nuts called "Number Ones". Similarly, budded nuts, are separated into Large, Medium and Baby sizes.

The graded nuts are collected in ventilated bins where they remain for a day or more until the superficial moisture absorbed during bleaching is evaporated. From these bins the nuts are weighed into sacks for shipment but not before they are given a careful final culling to remove any defective nuts which may have previously escaped.

Before shipment each lot is systematically sampled and several hundred nuts cracked and examined by a rigid inspection system to see that it conforms to the specifications laid down for that grade. Walnuts found equal in quality to the high standards set by the California Walnut Growers' Association for its Diamond Brand, are, after inspection, individually brand-

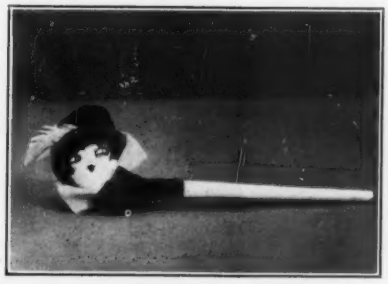
ed by an ingenious automatic machine which rubber stamps the well known Diamond trade-mark on each and every nut, thereby identifying it to the consumer.

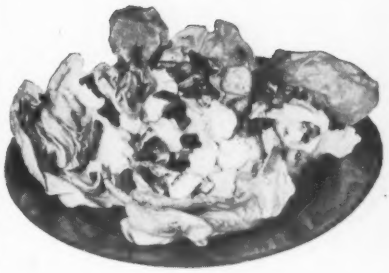
Many of the walnuts which are culled out in the packing house, because they are split or of poor external appearance, contain good kernels. These nuts are cracked by automatic machines and the kernels separated from the shells by hand, cleaned and graded according to quality. The best grades are sold to confectioners, bakers, etc. A considerable quantity is also sold in small vacuum sealed cans. This process preserves walnut kernels indefinitely without change and represents a very convenient and economical way to buy walnuts for culinary purposes.

I trust this brief description will give you a clearer conception of the care with which California walnuts are prepared for the market. These processes, carried on at nominal cost in large packing houses, insure the purchaser of standard brands of walnuts obtaining clean, bright walnuts of uniform size and containing a high percentage of sound, plump kernels. In this way, the consumer gets a quality product at a fair profit to the grower above the cost of production.

The packing and marketing of California walnuts is an excellent example of the advantages to both consumer and producer of marketing agricultural products on a large scale under constantly maintained standards of quality.

St. Patrick's Day Favors





Spring is the time for salad lessons

COOKERY students enjoy exercising their imagination and skill in preparing attractive salads.

An unusual and wholesome combination is found in Johnson Salad. The man who originated it says that it is built on philosophic lines—hence its name. The sauerkraut is beneficial; ALL-BRAN aids peristaltic action; the celery and pears furnish roughage and minerals; the oil is a lubricant.

JOHNSON SALAD

6 canned pears, 1 cup celery, 1 cup sauerkraut, ¼ cup Kellogg's ALL-BRAN, Russian Dressing.

Cut pears, celery and kraut in small pieces. Mix with Russian Dressing and add ALL-BRAN. Serve on lettuce. Garnish with two strips of pimiento crossed, and small rosettes of cheese. All ingredients should be thoroughly chilled.

Kellogg's ALL-BRAN

HELP YOURSELF TO HEALTH

Home Economics Department FH-3
KELLOGG COMPANY
Battle Creek, Michigan

Please send me a set of recipes using Kellogg's ALL-BRAN and Kellogg's Corn Flakes.

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Suggestions of Teachers Regarding Sources of Material

Editor's Note.—To assist teachers in obtaining material published by manufacturers of foods, FOOD AND HEALTH EDUCATION will gladly forward requests from teachers to these manufacturers. If those requesting booklets on which there is a charge, send the cost, FOOD AND HEALTH EDUCATION will gladly forward this, also. Some of the material available in printed form is listed below, each publication being given a key number.

Because of the vast amount of clerical work involved, teachers are asked to send each request on a separate slip of paper, size 4x4 in., giving the key number of the publication and name and address on each separate slip. Enclose slips in an envelope and send to Food and Health Education, 468 Fourth Avenue, New York City.

1. *"Temperature Charts."* Helpful charts, perforated for binding with lesson plans or may be hung on the wall through center perforation. Combination of time and temperature charts, together with standard recipes form quite a complete baking guide for class or home use.

3. *"Lesson Plans."* A set of booklets under the following captions: "Deep Fat Frying"; "Baking Powder Batters and Doughs"; "Cakes, Frostings and Fillings"; "Christmas Suggestions": "The Muffin Mixture and Its Variations"; "Baking Powder Biscuit and Its Relatives"; "Baking Powder." These are perforated so that they will fit into any note book.

4. *"Tempting Recipes."* Booklet featuring recipes for quick breads and various dessert dishes.

7. *"Feeding the Child for Health."* A good example of how progressive manufacturers are adapting the facts in science to their own educational publicity. Fruit and its place in the diet is the central point of the discussion.

24. *"Why We Refrigerate Foods."* Pamphlet treating of the reasons underlying food spoilage and why low temperatures retard food decomposition.

27. *"Reliable Recipes."* A seventy-five-page cook book prepared by the domestic science department of a large baking powder company. Recipes include directions for preparing all dishes in which baking powder is used. Material is well arranged.

97. *"The Romance of Ice."* Interesting booklet telling how the deeds of olden times have led to present performance in the ice industries.

108. *"Foods—Facts, Fads and Fancies."* Some helpful information in pamphlet form, presented by the editor of a dietetic magazine.

116. *"Domestic Science Bulletins."* A series of leaflets, arranged as lesson plans, featuring the use of fruit. Numerous recipes. Valuable for home economics classes and teachers of home economics.

151. *"Oleomargarine, Its Purity, Wholesomeness and Economic Importance."* Valuable information concerning the production, food value and economic value of oleomargarine. Prepared by the research department of a trade association.

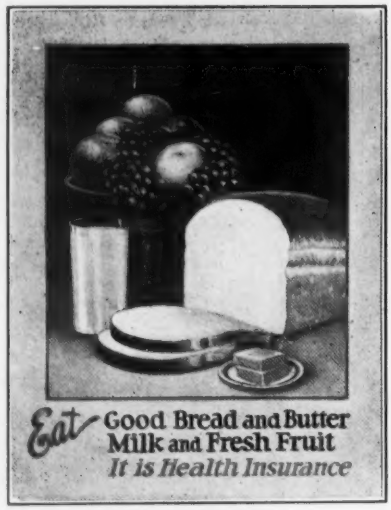
156. *"Twenty Lessons in Domestic Science."* Suggested lessons for the domestic science teacher. Issued by a baking powder company.

157. *"The Care of the Home Refrigerator." "Where to Place Food in the Household Refrigerator."* Two booklets giving practical and much needed information in a condensed form.

167. *"Pies of the Sunny South."* Booklet featuring pertinent points in pie making.

170. *"Sunkist Recipes for Every Day."* Fifty-page illustrated pamphlet giving a variety of recipes and directions for serving fruits. Ten-minute salads and ten-minute desserts are special features. Not furnished in quantity.

178. *"Dainty Desserts."* Leaflet containing recipes suitable for all occasions, with colored illustrations.



Poster 1—Health Insurance—shown above.

Poster 2—White Milk Bread—Shows a loaf of bread and gives the nutritive values of a 1½-lb. loaf in terms of ounces of fat, protein, carbohydrates and milk solids.

A health play "Marketing for Health," is also ready. It may be used for children from 4th to 8th grades.

TEACHERS!

Send Today for Our Pamphlets and Posters

There is no charge if you use the coupon below

Pamphlets

1. Marketing for Health—Suggesting a plan for a class demonstration on marketing.
2. Digestibility, Roughage, and Vitamins—Dr. W. C. Alvarez. From an address given at the Cal. Home Economics Convention.
3. The Bread of Life—Dr. E. V. McCollum.
4. Bread as the Physician Sees It—Dr. Morris Fishbein.
5. Foods That Give Health—Briefly discusses various kinds of food and their functions.
6. Modern Bread—Gives the nutritive value of bread as it is made commercially today.
7. The Truth About Food Fads—Dr. Agnes Fay Morgan.
8. What Foods Will Keep the Family Well—Has to do with meal planning.
9. Foods, Facts, Fads and Fancies—Dr. W. M. Happ—Discusses the question from the medical standpoint.
10. White Bread—Dr. W. M. Happ—Discusses the role of white bread in nutrition.
11. Answering Bread Criticisms—R. H. Shaw—Gives results from the Nutritional Laboratory.
12. The Story of Pie—A discussion of the nutritive value and place of pie in the diet.

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179. *"Nurses' Handbook of Recipes for Oranges and Lemons."* Recipes, tested and compiled by experts in convenient notebook form, for beverages, salads, desserts, and quantity recipes. Caloric content for each noted. Limited quantities distributed to nurses' classes only.

187. *"'Down East' Recipes."* Recipes for North Atlantic and Maine Coast fish products and some other high quality canned products of New England specialties. Colored illustrations suggest the most attractive ways of serving these dishes at the table.

198. "50 *Prize Winning Recipes for Bran.*" Booklet telling how one may enjoy bran three times a day.

200. *"Care of the Child's Food in the Home."* Authoritative discussion of importance on refrigeration showing growth of bacteria when proper care is lacking. By Dr. Mary E. Pennington.

215. *"Teacher's Outline for a Domestic Science Course."* A series of interesting bulletins with lesson plans.

216. *"Tempting Recipes."* Booklet containing recipes for biscuits, muffins, doughnuts, cakes, cookies, pies, pudding sauces, frostings, and candies.

220. *"Dietetic Bulletins."* Another series of leaflets, featuring each recipe with its value in calories and grams. For nurses and nurses' classes.

222. *"A Real New England Treat."* Pamphlet containing recipes on breakfast and luncheon dishes, tea and luncheon sandwiches, dinner dishes and desserts with colored illustration of prepared dishes, based upon a delicious canned brown bread.

231. *"Cake Secrets."* A thirty-six page booklet containing a variety of cake recipes with tempting colored illustrations. 10c each; 5c each sold in quantity to students.

234. *"The Story of California Oranges and Lemons."* Illustrated thirty-page booklet including early history of the California Citrus Industry.

238. *"The Romance of Baking Powder."* Pamphlet giving a good insight into the evolution of baking powder, with its value in calories and grams.

239. *"Evolution in Baking Powder."* Leaflet telling the function which baking powder performs.

246. *"Smoothtop Cookery with Gas, the Modern Fuel."* A helpful and attractively illustrated booklet. Among the many chapters are titles such as the following: Menus for a Month and Work Plans for a Week; Do You Cook Your Cereals Long Enough? The Healthful Way of Cooking Vegetables; Time-Saving Desserts; Do You Have Good Luck With Your Baking? It also contains many recipes.

247. *"Aluminum and Aluminum Ware."* Booklet containing a review of the latest scientific researches into the nature and uses of aluminum and the characteristics of aluminum cooking utensils. Aluminum Wares Association, Publicity Division, 844 Rush St., Chicago, Illinois.

"Like having fresh coconut always on hand" * *

say cookery experts *of this new fresh-canned coconut*

THE very next coconut dish you make, don't fail to try Baker's Canned Coconut, Southern-Style.

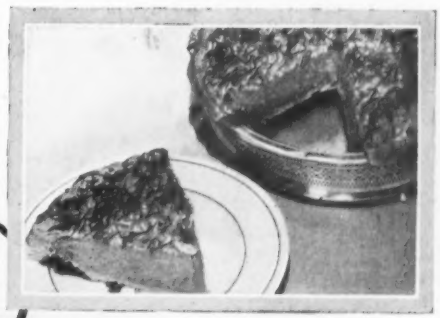
You can hardly believe the difference it makes. It isn't a bit like dried coconut. In moist tenderness, in rich flavor it is exactly like the fresh coconut that you grate yourself.

FREE—to teachers

All home economics teachers will want to know this new moist coconut. We want *you* to try it. And so we're offering you a sufficient supply for a class lesson—*absolutely free.* Fill out and send in the coupon below, and you'll get your supply at once.

COCOROONS:—Beat 2 egg whites with ½ teaspoon salt until stiff. Whisk in 1 cup sugar, 2 tablespoons at a time. Add slowly 2 cups cornflakes, then 1 cup Baker's Canned Coconut, Southern-Style, and ¼ teaspoon flavoring. Drop from teaspoon onto waxed paper on greased pan and bake 10 to 12 minutes in moderate oven.

Cocoroons



Coconut Butterscotch Pie

Mrs. Della Thompson Lutes, Housekeeping Editor of Modern Priscilla and Director of the Priscilla Proving Plant, makes this delicious butterscotch pie with the new fresh-canned coconut.

The old familiar kind, too

Baker's Premium Shred Coconut is made from the meat of specially selected coconuts—sugar cured. It is daintily and finely cut, carefully prepared and packed in double-wrappings of waxed paper, ensuring freshness.

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Name .....

School .....

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Number of students in Domestic Science Laboratory Courses .....

In connection with what laboratory lesson do you plan to use the coconut? .....

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BAKER'S

Canned COCONUT *Southern-Style*

Packed moist in tins with all its freshness and flavor.

4270

Domestic Science Experts say . .

"Cream of Tartar Baking Powder is the best" . .

REPRESENTATIVE Domestic Science Teachers in all parts of the country were recently asked, "Which type of baking powder do you use and prefer?" 4270 answered unhesitatingly, "Cream of Tartar."

And many of them gave their reasons. "Always good results"—they said—"No bitter taste"—"No harmful results or residue"—"Good quality—healthful product."

Royal, of course, is the cream of tartar baking powder. It is made with pure cream of tartar, a natural product of ripe grapes, imported for Royal for 50 years from Southern Europe.

Royal always leavens perfectly—makes your cakes and biscuits delicate and light. And it leaves no bitter taste.

The Cream of Tartar Baking Powder. Contains no alum. Leaves no bitter taste

Corn Sugar in Food Preparation

By Rosa Belle Doane—Hilda M. Croll and Natalie K. Fitch

Editor's Note—While the following paper is more technical in nature than our average material, it seemed worth while to offer our readers a story of this project, dealing as it does with such a practical point in the teaching of food preparation.

THIS study was undertaken to discover some of the principles underlying the successful use of corn sugar in food preparation. Corn sugar or glucose, manufactured from cornstarch, is a fine white granular product, standing between granulated and powdered sugar in fineness. A comparative study of weights, measures, and sweetness of the sugars has shown that corn sugar is slightly over four-fifths as heavy as cane sugar, that there are approximately two and three-fourths cups of corn sugar in a pound, as compared with two and one-third cups of cane sugar, and that corn sugar is about two-thirds as sweet as an equal volume of cane sugar and three-fourths as sweet as an equal weight of this sugar. These findings agree closely with those of other investigators.*

The general procedure of this investigation was to compare products in which cane sugar was used with those in which the sugar was replaced entirely, or in part, by corn sugar, the substitution being based on the relative sweetness of the two sugars. Considering sweetness and general desirability, the most satisfactory substitution resulted when one volume of cane sugar was replaced by one and one-half volumes of corn sugar; in other words, in place of one cup of cane sugar called for in standard recipes, it was necessary to use one and one-half cups of corn sugar. This increased volume of corn sugar was used both in partial and complete substitution. On the whole, the more complete the substitution, the greater was the difficulty encountered, and the greater the need for modifications in the recipes. Cakes made according to standard recipes in which only corn sugar was used were inferior in texture, color and flavor. These cakes were moist and heavy, and tended to remain moist longer than the cakes made with cane sugar. This may possibly be explained by the presence of a larger amount of sugar, or by the fact that various samples of corn sugar were shown to have a moisture content of 6.0 to 8.5 per cent, as compared with 0.01 per cent for cane sugar. Improvement in texture was secured in some cases by the addition of slightly more flour than that employed in the standard recipes. During the baking of corn sugar cakes a brown color was developed throughout the products and in some cases a bitter and penetrating flavor was noted. These effects may be attributed to the fact that corn sugar begins to caramelize at a lower temperature than cane sugar. They may be obviated in part by baking the cakes at a lower temperature than is customary with cane sugar cakes; in some cases improvement resulted on substituting sour milk (without baking soda) for the sweet milk; finally, the undesirable color and flavor could be masked by the addition of small amounts of spices, chocolate, raisins or nuts. In some products, such as muffins and waffles, in which the development of a brown crust is desirable, this tendency towards browning may be of advantage. All of these undesirable qualities of corn sugar cakes were lessened when partial substitution of corn sugar for cane sugar was employed. In butter cakes satisfactory products were obtained when one-half of the volume of cane sugar called for was replaced by corn sugar, in sponge and angel cakes when only one-fourth of the cane sugar was so replaced.

The effect of complete substitution with corn sugar in the preparation of certain candies was undesirable, since in the case of fondant and fudge the time of beating was unduly prolonged, and the products were hard, crumbly and waxy, and could not be moulded. Caramels did not harden, brittles were tough, and on standing the color of fudge faded. To obviate these difficulties, partial substitution of corn sugar for cane sugar was tried, the best proportion being secured when one-tenth of the volume of cane sugar called for was replaced by corn sugar.

The results of a few experiments performed indicated that complete substitution with corn sugar may be made in jellies and preserved fruits. It was not possible in the duration of this study to test the keeping qualities of these products. Desirable results were also obtained with entire use of corn sugar in yeast and quick breads, cookies and doughnuts, custard and cornstarch puddings, ice creams, stewed fruits and whips, fresh fruits, cereals and beverages.

*Editorial, *J. Am. Med. Assn.*, 1926, lxxxvi, 628.

Biester, A., Wood, M. W., Wahlin, C. S., *Am. J. Physiol.*, 1925, lxviii, 387.

Editorial, *J. Am. Med. Assn.*, 1925, lxxxv, 977.

Editorial, *Hygeia*, 1926, iv, 223.

(Iowa Extension Service, Ames), *Home Economics Bul.*, 92, 1926.

Throughout this investigation the dishes in which corn sugar was used were not considered identical in quality with those employing cane sugar, since it was always possible to distinguish the product containing corn sugar. In addition to further study of the use of corn sugar in food preparation, investigation should be made of its physiological effect. Because of the necessity for using one and one-half times as much corn sugar as cane sugar, to obtain approximately the same degree of sweetness, an extensive use of corn sugar in food preparation might possibly lead to an undesirable increase in the amount of sugar in the diet.

The economic aspects of this problem are not least in importance. Taking into consideration differences in weight, measure, degree of sweetness, and desirability, it has been found, by calculations based on current quotations in the local market, that the amount of corn sugar needed to replace cane sugar in food preparation is of practically the same cost. On the other hand, if in the future the demand for sugar were satisfied to a greater extent by corn sugar, the market prices of both cane and corn sugars would undoubtedly be affected.

Grateful acknowledgment is extended to the Corn Products Refining Company, Chicago, Illinois, and to the Clinton Corn Syrup Refining Company, Clinton, Iowa, for the corn sugar used in this investigation.

Thanks are due to Professor Ruth A. Wardall for helpful suggestions and criticism throughout the course of this study. Assistance was rendered by other members of the staff in the Department of Home Economics and Beulah Becker and Mildred Weaver, students in the department.

A Health Experiment in Harlem

By Mary Swartz Rose and Grace Reeve*

Editor's Note—There is a double pleasure in presenting the following paper: First, it is by distinguished educators and of constructive value for teachers; second, it gives readers of FOOD AND HEALTH EDUCATION opportunity to become acquainted with "The John Hancock News," house organ, so to speak, of Public School 157, 327 St. Nicholas Avenue, New York City.

THE first of last October a group of young women from Teachers College began a series of Friday morning health lessons in Miss Goodhart's fifth grade room.

The very first question was, "What is health and why do we need it?" The world series of baseball games was being concluded, the football season was opening, tennis tournaments were being held almost daily, and Gertrude Ederle had made her famous swim across the English Channel. "What must these people do in order to win?" "Practice." "And what must they practice to get?" It was decided that they needed to be fleet of foot, able to stand hard blows, to have a steady eye and good courage, as well as what one boy described as "a long breath"—good wind.

This led to a consideration of what the boys and girls want to be when they grow up and what qualities these various callings would demand. Each boy and girl wrote his own answer and if possible illustrated it with a picture

*Reprinted from "The John Hancock News."

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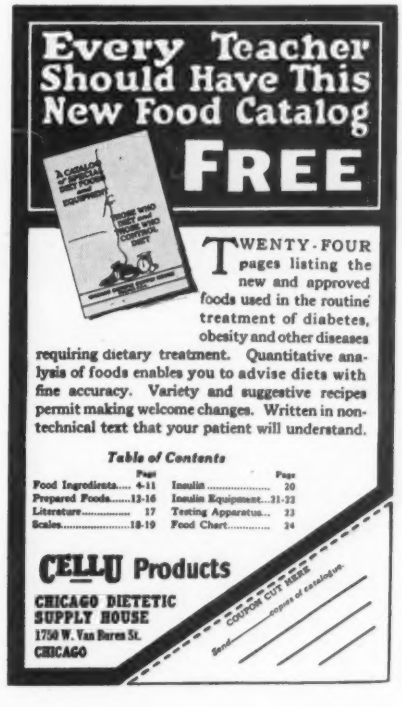
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of whatever he wished to be. The girl who aimed at becoming a dressmaker wrote: "Good eyesight, nimble fingers, ability to sit at work a long time." The prospective nurse thought of "good feet" and "steady nerves"; the mechanic of "quick thinking, courage and strong muscles." The best of these papers were made into a poster for the class room wall.

From thinking about these things it was decided that boys and girls might find it worth while to study how to be healthy, and that one of the things needed for health is food.

"Does food make much difference in our lives?" asked the teacher. She suggested that the answer might be found in a book. "Food Facts for Every Day," by F. E. Winchell, and passed copies around the class. The children read this aloud, "Dogs were used in an experiment in animal feeding. Scientists had found out what foods were best for growing puppies and wanted to show other people in the best way possible. They fed half the puppies of one litter with great care, giving them the best foods for dogs of their age and size. The other dogs had all they wanted to eat, but not the best kind of food for growing puppies. The same kind of tests were made on chickens. They were hatched at one time from eggs laid by the same hen. One chick was fed in a way that would make him grow strong and vigorous. The other had just as much food, but food of a different kind and he did not grow. The same thing happened to two pigs. It would be cruel, indeed, to feed animals so carelessly that they would be unhealthy as these underfed chickens and pigs were. Poor feeding in these cases was not, however, the result of carelessness, but a necessary experiment in animal feeding. After the experiment was over, the underfed animals were brought up to weight by being fed properly. All such tests are necessary to discover facts about food and then to teach these facts to other people."

"What did the book call this?" "An experiment." "What did the people want to find out?" "How to make the best kind of a dog." "An experiment is trying to find out about something. We of the fifth grade are going to have an experiment to find out something about food."

Three roomy, round, wire cages fitted with cups for food and water were provided for this experiment. In each were two young rats, a "girl" and a "boy," just four weeks old. They were no longer babies but able to eat what they chose. One cage was called the "Health Cage." The rats in this were to have the very best food—milk in plenty, and as much whole wheat bread as they could eat. Another cage was set aside for "Mr. and Mrs. Won't Try." These rats said, "I don't care what anybody says, I am going to eat what I like." They liked coffee to drink and white bread with it. So that is what they had in this experiment. The third cage contained "Mr. and Mrs. Will Try." They had heard a little bit about food making a difference in the way you grow, but they didn't take pains to find out what would be best. They liked white bread and coffee, but they said they would try adding a few vegetables. So the "Will Trys" had, in addition to white bread and coffee, just a little each of three vegetables.

"How shall we know a healthy rat?" asked the teacher. "It will have nice fur, bright eyes, a pink tail, pink ears and feet." "Can you think whether some of those things could be said of boys and girls?" "They will have bright eyes, glossy hair, pink gums and finger nails, and a clean, clear tongue."

Week by week the changes in the three cages were studied. At the end of eight weeks this is how they stood:

The Health Cage rats had gained 287 grams and had the signs of healthy rats.

The "Will Trys" had gained only 83 grams and their fur was rather rough.

The "Won't Trys" had gained only 74 grams and they were miserable. They had lost great patches of fur and were so sick that everybody wanted to do something for them.

So the class decided that the "Will Trys" and the "Won't Trys" ought to

(Continued on Page 48)

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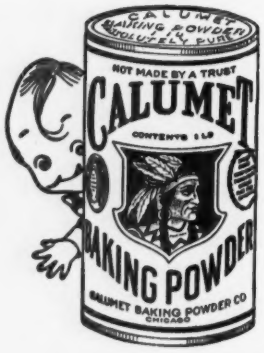

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A Health Experiment

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have the same food as the health cage.

For while the rats had been showing what a difference food makes in growth, the children had found out that every boy and girl needs a quart of milk a day for the very best growth, and that if you cannot manage to get a quart you must get as much as you possibly can.

When the poor "Won't Trys" were given the good Health Cage diet, the way they grew fur was wonderful. The patches that were so bare on Friday had a lovely growth of tiny new hairs by Monday, and by the following Friday you scarcely could tell where the bare patches had been and oh, how much bigger and happier they were!

The "Will Trys" looked silkier and livelier, too.

It was hard to believe they could gain so much in a week, but they had a great deal of lost time to make up for.

The last lesson was given before all the teachers. Mrs. Health gave everybody a surprise by bringing with her eight babies. Because their mother and father have had such a good diet, these babies are now expected to grow fast, and when they are old enough they will eat the Health Cage diet too and become fine, large, healthy animals, for the experiment has shown how good whole wheat bread and milk are for growth.

Three of the girls of this class made up a little play to tell the story of the experiment to the teachers of Public School 157. It ran like this:

Mrs. Won't Try: "Good morning Mrs. Will Try, won't you go for a walk in the sunshine this fine morning?"

Mrs. Will Try: "Oh, I would like to, Mrs. Won't Try, but I feel to miserable. I have a cold and a stomach ache and I really can't go. Oh, here comes Mrs. Health."

Mrs. Will Try and Mrs. Won't Try: "Good morning Mrs. Health, how are you today?"

Mrs. Health (a fine, large girl): "Oh, I just feel fine. How are you?"

Mrs. Will Try: "I don't feel a bit well."

Mrs. Health. "What do you eat?"

Mrs. Will Try: "Coffee and white bread mostly and a few vegetables."

Mrs. Health: "You must eat whole wheat bread and drink milk and eat cereals and fruit and vegetables." (She turns to Mrs. Won't Try, who is very tiny and thin). "And what are you eating that makes you so little?"

Mrs. Won't Try: "I like coffee and white bread best."

Mrs. Health: "That is why you are so skinny, won't you try my diet?"

Mrs. Won't Try refuses and the first act is over.

Three weeks elapse and there is another meeting of the three friends. Mrs. Will Try has acted on Mrs. Health's suggestion and reports that she feels much better. On the strength of this Mrs. Won't Try promises that she, too, will give the health diet a trial. Another three weeks elapse. Again the friends meet. This time Mrs. Health and Mrs. Will Try exclaim over Mrs. Won't Try's changed appearance. She looks larger and stronger and has to admit that "food made the difference."

The boys and girls have also learned that something about measuring the amount of food they need and next term will find out more about different kinds of food.

Editorial

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until it now includes the whole child rather than merely the physical child. This year, May 1st coming on Sunday, leads up logically to that weak spot in the whole program of child nurture—consideration of the child's spiritual needs. The churches of the country have been asked to examine into the contribution they can make to knowledge and training of the child in his spiritual aspect and to give to this task the same thoroughness which educational and scientific groups have given to the physical and mental aspects.

Pediatricians, educators, public health officials and spiritual leaders will meet with the great lay organizations to pool their knowledge and experience and try to determine how to bridge the gap between scientific knowledge and research and its application to the life of the child. Out of such a common council of those who are concerned with the problems affecting the child should flow back into our national life a great stimulus to fresh endeavor and a welding of forces to insure those rights which Mr. Hoover describes in the new Child's Bill of Rights.

Through such careful and unified building shall the challenge of youth of today be answered in the new generation.

"The Peptomist"

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next Friday by our club, to get money to pay for the basket ball uniforms, and shrubbery and flowers for the cottage; a dinner for the county school board; a play to be given, and in conjunction with the agriculture students under Prof. W. H. Starnes to entertain with a "Father and Son" and "Mother and Daughter" banquet.

The members of the class will receive their rings and pins soon.

We girls take turns in caring for the cottage, thus getting practical experience in housekeeping.

ICIE MAE COLLINS.